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(56) Documents cited

**GB A 2123050**

**GB 0642672**

**US 4325290**

**GB 1603095**

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**GB 1151191**

(58) Field of search

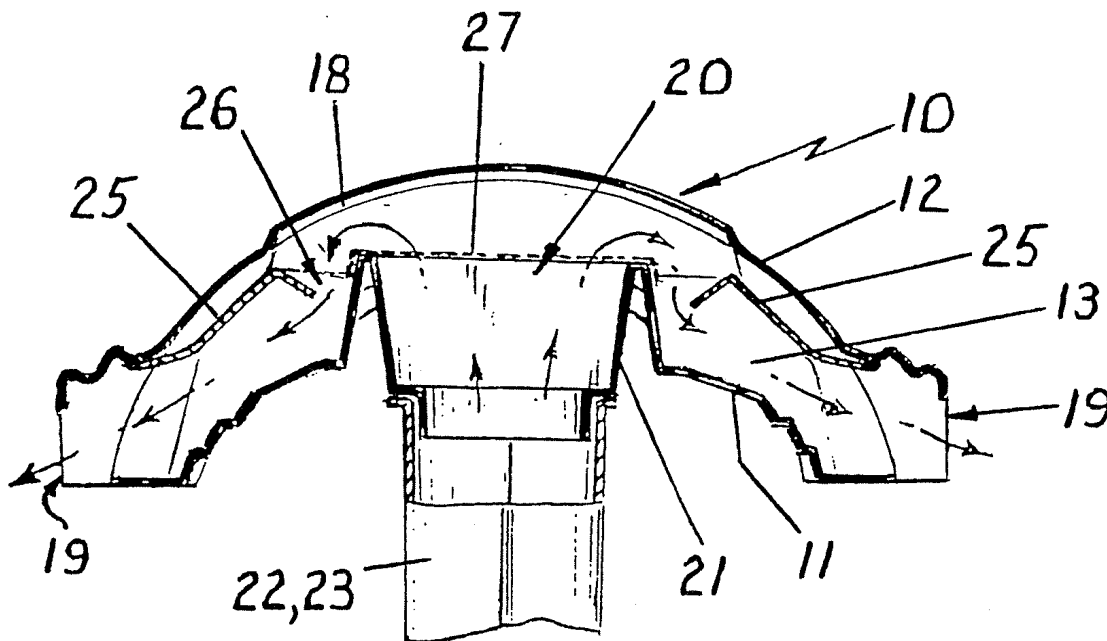
**F4V**

**E1D**

**Selected US specifications from IPC sub-class F24F**

(54) **Roof ventilator**

(57) The roof ventilator tile (10), which is substantially indistinguishable from adjacent non-ventilated roof tiles, has a domed transverse cross-section and a double walled construction providing an internal space (13) between inner (11) and outer (12) walls. The longitudinal edges of the inner and outer walls (11,12) are spaced apart to provide an aperture (19) whereby the space (13) communicates with the outside of the tile (10). An aperture (20) along the centre-line of the inner wall (11) enables the inner space (13) to communicate with a tubular part (22,23) to ventilate the interior of the roof or a chimney or soil pipe as desired. A gauze or filter 27 prevents entry of insects and leaves.



**FIG. 3**

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

**GB 2 183 819 A**

## SPECIFICATION

### Ventilator

- 5 This invention relates to ventilators, and in particular to a ventilator incorporated in a ridge tile of a roof of a building.
- It is known to incorporate a ventilator in a ridge tile of a building roof so as to provide
- 10 ventilation either to the roof space or to a flue, soil pipe or the like. In the known devices an aperture is provided in the ridge tile, which is usually of concrete or the like material, through which aperture a pipe extends.
- 15 A cap of larger dimensions than the pipe is fitted to the upper end of the pipe to prevent the ingress of rain, snow or the like, the air passage being under the rim of the cap. Conventionally the pipe and the cap are of a plastics material. However, with such an arrange-
- 20 ment the cap necessarily projects above the ridge tile so that a smooth ridge line is not maintained.
- It is an object of the present invention to
- 25 provide a ventilator incorporated in a ridge tile, which allows for the maintaining of a smooth ridge line.
- The invention provides a ventilator in the form of an elongate ridge tile having a generally domed transverse cross-section, said ventilator being of double walled construction having an interior space between inner and outer said walls, which space communicates with the outside of said ventilator adjacent at
- 30 least one longitudinal edge thereof, and having a tubular part depending from the inner wall adjacent the centre thereof, the interior of said tubular part communicating with said interior space.
- 40 One embodiment of ventilator in accordance with the invention will now be described with reference to the accompanying drawings in which:-
- Figure 1* is a partly cut away perspective
- 45 view,
- Figure 2* is a perspective view of a pipe for attachment to the tubular part of the ventilator of Fig. 1.
- Figure 3* is a transverse cross-sectional
- 50 view, and
- Figure 4* is a longitudinal sectional view of part of the ventilator to an enlarged scale.
- Referring now to the drawings there is shown a ventilator 10 in the form of an elongate roof tile having a generally dome-shaped transverse cross-section, as shown particularly in Fig. 3. The ventilator 10 is of double-walled construction having inner and outer walls 11,12 respectively. Between the inner wall 11 and the outer wall 12 is an interior space 13. The walls 11,12 are relatively thin and the interior space 13 relatively narrow so that the overall thickness of the double walled construction is substantially the same as that of a
- 65 conventional concrete ridge tile. In the present

- case however the walls 11, 12 may be of any suitable material such as a plastics material. The outer wall 12 has laterally extending ridges 13 thereon and is of an appearance
- 70 generally similar to that of a conventional concrete ridge tile so that when in situ on the roof of a building the ventilator of the present invention will be indistinguishable, or substantially indistinguishable from the conventional
- 75 ridge tiles adjacent thereto. At each end of the ventilator 10 is a groove and lip formation 14 which in use is situated underneath an adjacent conventional ridge tile (not shown). Also provided at each end of the ventilator 10
- 80 is a "butterfly" tie wire 15 which is embedded in the cementitious bedding material by means of which the adjacent conventional ridge tiles are secured in place along the ridge of the roof of a building. By these means the
- 85 ventilator 10 is secured in place on the ridge of the roof. A sealing strip 16 is provided on the hip of each groove and lip formation 14 so as to provide a weather seal between the ventilator 10 and the adjacent ridge tiles, the
- 90 sealing strips 16 being of any suitable material such as foamed plastics material or rubber.
- The inner wall 11 and the outer wall 12 are secured to each other at each end 14 of the ventilator 10, for example by rivets 17. However, the longitudinally extending edges of the inner and outer walls 11,12 are spaced apart to provide apertures 19 whereby the interior
- 95 space 13 between the inner and outer walls 11,12 communicates with the outside of the ventilator 10. Along the longitudinal centre-line of the inner wall 11 is an aperture 20, around the periphery of which is a depending flange 21. Attached to the flange 21 may be either a relatively short oblate tube 22 as shown in
- 100 Fig. 1 or a funnel 23 as shown in Fig. 2. If the tube 22 is attached the ventilator 10 is suitable for use in ventilating the roof space of the building to which it is attached. Alternatively when the funnel 23 is attached to the
- 105 ventilator 10, a flexible pipe 24 may be attached thereto, the other end of the flexible vent pipe 24 being attached to a flanged opening in a soil pipe, flue or the like. Air or fumes are able to pass upwardly through the
- 110 tube 22, or vent pipe 24 and funnel 23, through the aperture 20, interior space 13 and apertures 19 to atmosphere as shown by the arrow in Fig. 3. Passage of rain water, snow or the like in the reverse direction is prevented since the interior space 13 provides an
- 115 upwardly extending channel between the aperture 19 along a longitudinal edge of the ventilator 10 and the aperture 20 along the longitudinal centre-line of the inner wall 11. An internal flange member 25 is provided, secured to the inner wall 11 at each end 14 of the ventilator 10. The flange member 25 has an aperture 26 therein of larger dimensions than the
- 120 aperture 20 in the inner wall 11 and has a gauze or filter 27 across the apertures 26 and
- 125
- 130

20. In consequence, the passage of insects, leaves or the like from the atmosphere into the roof space or vent pipe 24 is prevented.

## 5 CLAIMS

1. A ventilator in the form of an elongate ridge tile having a generally domed transverse cross-section, said ventilator being of double walled construction having an interior space
- 10 between inner and outer walls thereof, and having a tubular part depending from the inner wall adjacent the centre thereof, wherein said space communicates with the outside of said ventilator adjacent at least one longitudinal
- 15 edge thereof, and with the interior of said tubular part.
2. A ventilator according to claim 1 wherein said walls are of a plastics material.
3. A ventilator according to claim 1 or
- 20 claim 2 wherein said outer wall has laterally extending ridges thereof.
4. A ventilator according to any one of claims 1 to 3 wherein a groove and lip formation is provided at each end of said ventilator.
- 25 5. A ventilator according to claim 4 comprising a sealing strip provided on the lip of each groove and lip formation.
6. A ventilator according to claim 5 wherein said sealing strip is of foamed plastics material.
- 30 7. A ventilator according to claim 5 wherein said sealing strip is of rubber.
8. A ventilator according to any one of claims 1 to 7 comprising a tie wire disposed at each end of said ventilator.
- 35 9. A ventilator according to any one of claims 1 to 8 wherein the inner and outer walls are secured to each other at each end of said ventilator.
- 40 10. A ventilator according to claim 9 wherein the inner and outer walls are secured to each other by rivets.
11. A ventilator according to any one of claims 1 to 10 wherein the inner and outer
- 45 walls have respective longitudinally extending edges which are spaced apart to provide an aperture therebetween whereby said inner space communicates with the outside of said ventilator.
- 50 12. A ventilator according to any one of claims 1 to 11 wherein said tubular part is secured to a depending flange disposed around a central aperture in said inner wall.
13. A ventilator according to claim 12
- 55 wherein said tubular part is an oblate tube.
14. A ventilator according to claim 12 wherein said tubular part is a funnel to which a flexible pipe is attached.
15. A ventilator according to any one of
- 60 claims 12 to 14 comprising a flange member secured to said inner wall at each end of said ventilator, said flange member having an aperture therein of larger dimensions than said aperture in said inner wall.
- 65 16. A ventilator according to claim 15

wherein a filter device is disposed across said apertures in said flange member and said inner wall.

- 70 17. A ventilator substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

## CLAIMS

- 75 Amendments to the claims have been filed, and have the following effect:—

New or textually amended claims have been filed as follows:—

1. A roof ridge ventilator in the form of an elongate ridge tile for use with non-ventilating
- 80 ridge tiles disposed in end to end relationship therewith along a roof ridge, said ventilator having a generally domed transverse cross-section, being of double walled construction having an interior space between inner and
- 85 outer walls thereof, and having a tubular part depending from the inner wall adjacent the centre thereof, wherein said space communicates with the outside of said ventilator adjacent at least one longitudinal edge thereof,
- 90 and with the interior of said tubular part, and having at each end of said ventilator a locating formation thereon adapted to be located in use under an adjacent non-ventilating ridge tile with said outer wall substantially co-planar
- 95 with an upper surface of said adjacent non-ventilating ridge tile.
4. A ventilator according to any one of claims 1 to 3 wherein said locating formation comprises a groove and lip formation.
- 100 18. A pitched roof having a ridge, and having a roof ridge ventilator according to any one of claims 1 to 17 and a plurality of non-ventilating ridge tiles disposed in end to end relationship along said ridge, said ventilator
- 105 having each of its locating formations located beneath an adjacent non-ventilating ridge tile and said outer surface of said ventilator being substantially coplanar with an upper surface of each of said adjacent non-ventilating ridge
- 110 tiles.
19. A roof according to claim 18 wherein said ventilator and said non-ventilating ridge tiles are embedded in cementitious bedding material.

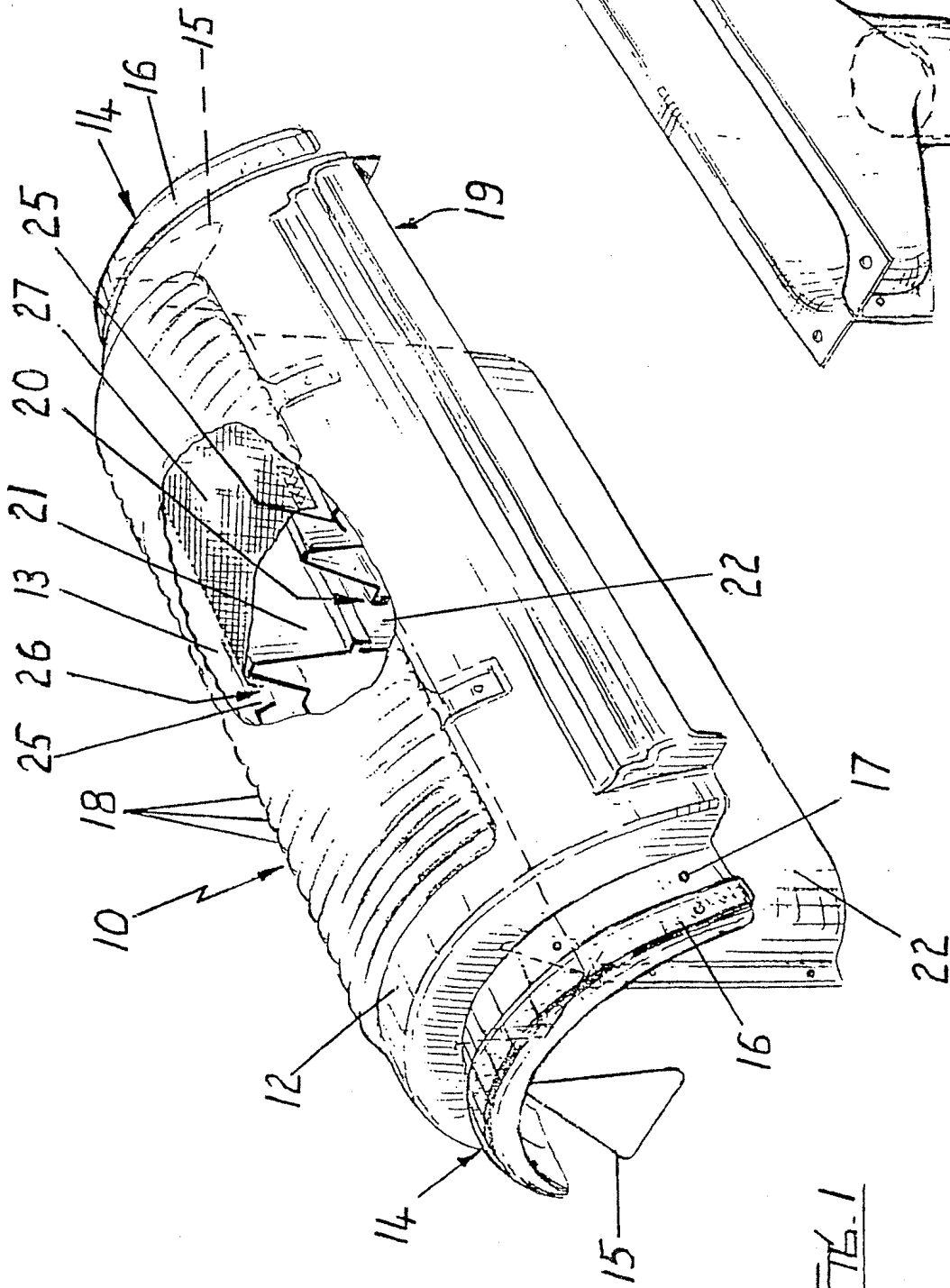


FIG. 1

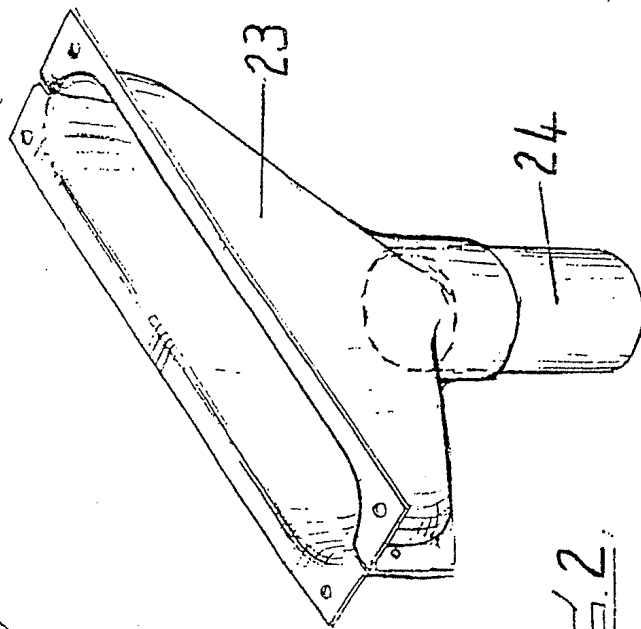


FIG. 2

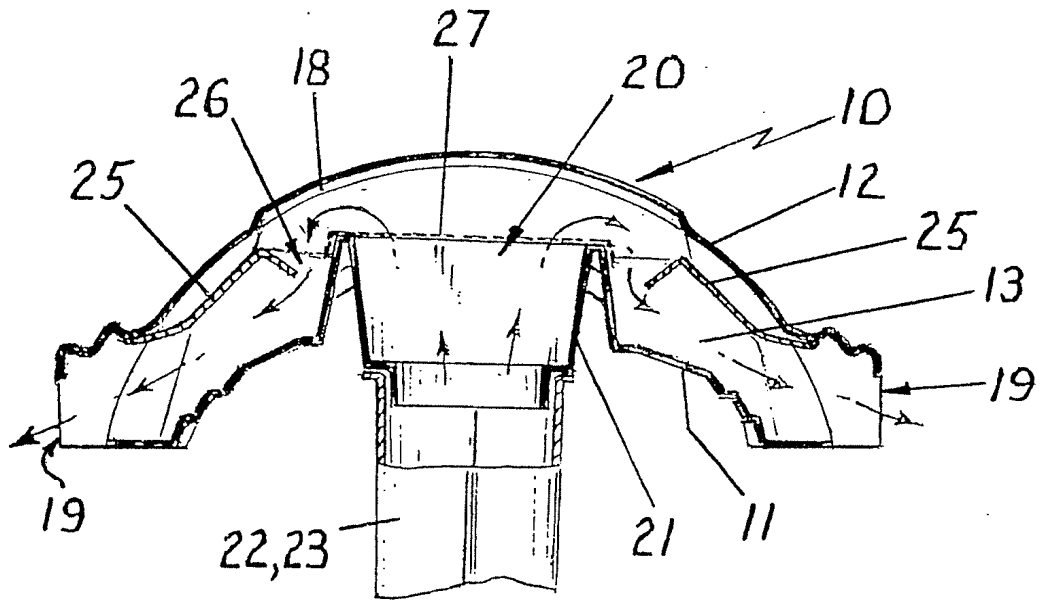


FIG. 3

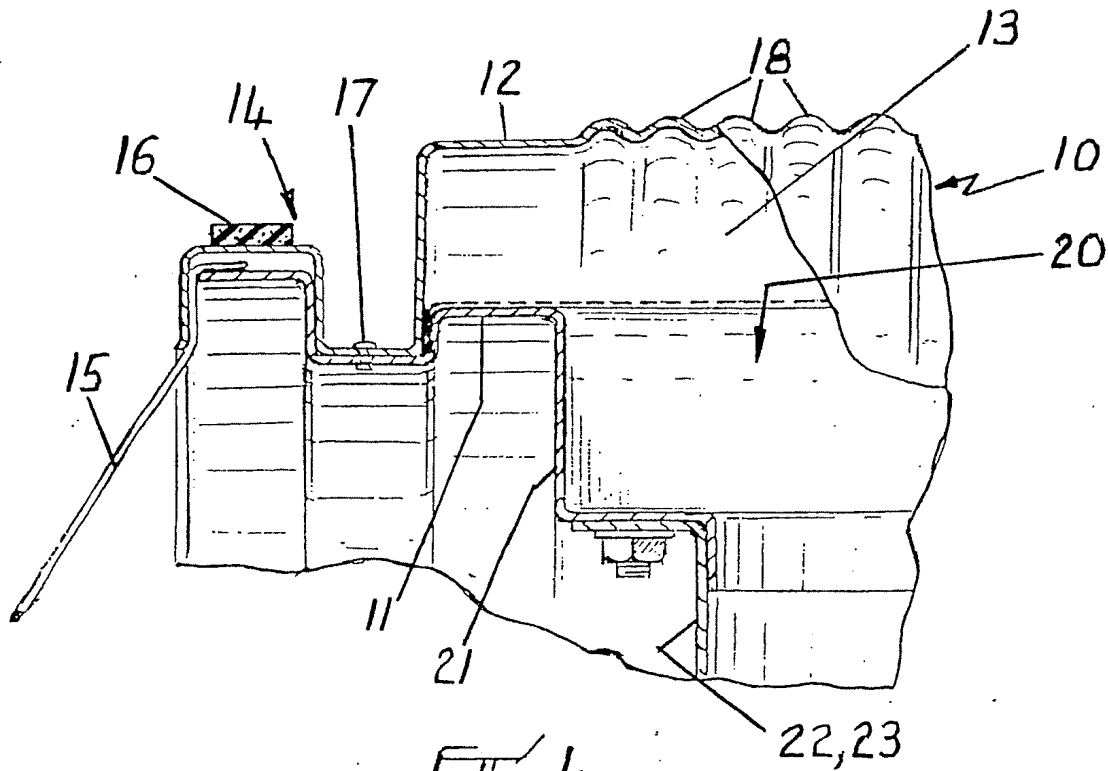


FIG. 4